

A PROGRESS REPORT: THE 'QUALITY OF LIFE' IN A METHOD OF INTEGRATED PLANNING*

ASPECTS OF AN ITALIAN RESEARCH PROJECT, 'PROGETTO QUADRO'

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This paper describes the main concepts and approaches of a method of integrated planning developed in Italy. This work, still in the research phase, is sponsored by the Italian government agency responsible for economic planning.

Formally entitled 'Progetto Quadro', the project involves construction of a reference framework composed of a set of highly disaggregated socio-economic accounts. This includes a resource-use analysis of structural and functional interdependencies of the economic system and of its operation with regard to a societally inspired program-structure.

1. 'DETERMINANTS' AND INDICATORS OF THE QUALITY OF LIFE

In recent years, improvement of 'quality of life' has become a primary goal—at least in the more advanced industrialized countries. This desire stems from the realization that economic growth, at least as it is conceived and measured by traditional national accounting methods, is no longer sufficient to guarantee real 'wellbeing'.†

As a result, vigorous efforts are being made in such countries to identify and specify new 'indicators'. Commonly called 'social indicators', these would be designed to measure the level of, and improvement in, the 'quality of life'.

Much work has already been done in this field.

* Presented by author at the United Nations Economic Commission for Europe's Seminar on Factors and Conditions of Long Term Growth, Stockholm, Sweden, December 1973.

† There are those who maintain—probably with validity—that this awareness has developed precisely because our more essential social needs have been satisfied by the much criticised economic development which we have experienced.

‡ On the other hand, if the problems of development (including the various aspects of the quality of life) are set in the context of the long run, it is precisely they which characterize the growth process and it is through them, using appropriate indicators, that growth can be measured.

§ Most countries are now involved in some form of collaboration. Another reason for the reserve noted is a reluctance to formulate schemata which correspond too closely to national situations and 'values'. Obviously, this would hinder serious international comparisons—which, nonetheless, remains the most 'popular' in the field of development.

There is, however, a dearth of clear methodological premises for the formulation of the new indicators; indeed, most of the difficulties encountered in this field of activity can be attributed to this deficiency. The 'problems' inherent in the measurement of the 'quality of life' have been tackled in an empirical fashion without any systematic reference framework, and the solutions offered in many cases have reflected partial and incomplete viewpoints.

The debate among the proponents of differing approaches, generally individually valid in themselves but always partial, is therefore sprawling and relatively futile, and would have been resolved long since had the approach adopted been integrated, global and systematic.

What are now required are systematic efforts to construct a taxonomy of those factors (or requirements) which influence (or characterize) the quality of life. Only then will it be possible to suggest indicators appropriate for measuring those factors.‡ Certainly an integrated approach encompassing the *complete set* of the factors would involve great difficulties.

Given its multidisciplinary character, such a task could hardly be handled by individual researchers working separately. Moreover, classification of the factors which influence quality of life requires choices to be made which involve *value-judgements*. Even research groups with no official status have been hesitant to make or merely recommend such choices. This reticence and abdication of scholars combined with indifference on the part of public agencies has prevented adoption of any truly 'global' initiative in this field.§

International public organizations, less involved as they are in administrative routine than national governments, should be pressed to assume the burden of

filling this vacuum. They should proceed, with expert backing, to the formulation of schemata for classifying 'quality of life' factors—always in accordance with the social concepts and social goals of their member countries. With this reference point—at one and the same time more secure and less controversial—private research on social indicators would have much more utility and concrete adaptability for specific national situations.*

2. A FIRST ATTEMPT IN ITALY AT CLASSIFYING FACTORS DETERMINING THE QUALITY OF LIFE

As part of preparatory research for the drafting of the Five Year Plans, the Italian government sponsored a first attempt at classifying those factors which determine the factors of the quality of life. The basis for such a classification is a categorical structuring according to social objective of all programs involving use of national economic resources. The first results of this research exercise are reported in Appendices 1 and 2.

What has been attempted is the construction of an over-all 'system' for Italian society, comprehending all those needs and goals deemed to be of collective interest. This 'system'—formally entitled *Program Structure*,[†] (Progetto Quadro)—is represented by an interlocked sequence of four-digit items, in which each digit represents an 'end' for each succeeding number and a 'means' for each preceding number.[‡] These items have

* It is appropriate, however, to recall the initiative taken two years ago by O.E.C.D. in forming a working group on social indicators. Very properly, the working group dedicated the first phase of its study to an attempt—now completed—to develop a list of social concerns common to most O.E.C.D. countries. This list (see *List of social concerns common to most O.E.C.D. countries*, Paris, June 1973) has a three-digit analytical structure. The O.E.C.D. group has now passed onto the second phase—the study and recommending of indicators for each of the social concerns and sub-concerns selected.—The O.E.C.D. project is a comprehensive work of great importance and scale. It would be very useful, however, to extend it to also include socialist and developing countries. This could be done under the auspices of the relevant technical and scientific cooperation agencies of the United Nations.

[†] The nomenclature is identical to that used in the American PPBS (Planning-Programming-Budgeting System) with one substantial difference. In the American case the nomenclature is applied to the goals of public spending, while in the case of Italy, it may be applied to over-all national (or societal) public and private spending.

[‡] The choice of the classes or categories obviously results from a selective process which is conceptual, arbitrary, and complex and which cannot be illustrated here. (See report No. 2 of the 'Progetto Quadro', published by the Ministry of the Budget and Economic Planning, edited by the Center of Economic Research and Planning: 'Program Structure, a Systematic Operational Basis for Planning'.) For the content of 'Progetto Quadro' (PQ) see below.

been selected for their capacity to reflect a substantial use of economic resources; this permits the 'program structure' to be connected to a system of national accounting.

3. THE INTEGRATION OF 'SOCIAL' AND 'ECONOMIC' ACCOUNTS

Italian experience suggests that the 'program structure' can be used as a technique for integrating social accounts with a traditional economic accounting system.

Social accounts have often been founded on a system of 'social indicators' which are intended to measure—generally in physical terms—the costs and benefits of given levels of well-being. By remaining isolated from traditional economic accounts, this type of social accounting system has served a purely indicative function. It has been oriented toward an examination of current conditions and to the compilation of so-called 'social budgets' and 'social reports'. But it has not served an 'operational' function.

The first steps have been taken in Italy to an integration of the two systems of accounts. It is considered that the *bridge* to link them—or rather, the denominator common to both—is *final resource use*. That is, 'social' goals need not be differentiated from 'economic' goals of we specify, as the common denominator, the resources which are necessary to achieve them.

The 'program structure' serves as a common classificatory schema for both the determining factors of the 'quality of life', according to which appropriate indicators of improvement can be elaborated, and the sectors of *final resource use* arising out of the choices linked to goals which are specified in the program-structure. Whatever may be the *current* availability of goods and services in each of the sectors of final use specified in the program-structure, modification of the current situation will imply a use of resources. That is a certain absorption of resources is required for each step taken toward attainment of the 'standard' specified by a program indicator. Thus, in planning for future needs, a programmed accounting of resources may be obtained by integrating the items of traditional economic accounts with those of the program structure.

In Italy this integration has been secured by constructing a two-part 'accounting framework' of resource use consisting of a *current* section and a *program-timed* section. Each section has three dimensions: *sectoral*, in which resource use is disaggregated by sectors corresponding to the items of the program-structure; *institutional*, in which the use is disaggregated by user institution (State, Region, public agency, private and public enterprise and family); *territorial*, in which use is disaggregated by relevant territorial area (region and 'metropolitan system'). On the basis of this accounting framework of *uses* another has been con-

structured for *formation* or *production* of resources.* The second framework has the same characteristics: two sections (current and program-timed), and three dimensions (production by sector, by institution and by geographical area).

All criteria required for evaluation of social needs are included in the programming section of the resource use accounts in so far as they have or may have quantified or quantifiable relevance. The bridging between the systems of social accounting and economic accounting thus is achieved.

Any planned change in a resource use sector (or, alternatively, in an item of the program-structure) corresponding to a sectoral policy aimed at improving a given social condition can have an effect on the social situation relative to another use sector (or another item of the program-structure). In order to estimate the effect or the interdependencies of each operation in a given use sector for the over-all situation of all the other sectors, it would be necessary to construct a matrix table of the interdependencies among all the items of the program-structure. The parameters of these interdependencies are hard to define and even more difficult to follow through time. The first phase of the Italian research project, 'Progetto Quadro', has not studied this aspect in depth, but it is hoped that the second phase, which is currently in progress, will yield satisfactory results. It will be appropriate during this phase to concentrate on those areas of the matrix where interdependence is stronger and has substantial relevance and significance.

But systematically identifying and measuring such program interdependencies (inter-items), while still preserving the already established interdependencies of the general model (among sectors, territories and institutions, and between use and production), we can delineate more clearly the links of the general system through partial optimization of the very system itself. We will then be in a position to replace the great variety of partial socio-economic models of different sectors of resource use *and* production. Even if such models so far developed have yielded very interesting results, they do have a tendency to optimize sub-systems, thereby neglecting the optimization of the over-all planning system.

The general optimization of Progetto Quadro represents the fusion of economic and social approaches (and indeed also a 'physical' approach): it is therefore an integrated process for optimizing choices regarding the 'quality of life'.

4. PROGRESS IN CONSTRUCTING THE PROGRAM FRAMEWORK

The construction of the general accounting frame-

work (current and program-timed) dealing with use and production of resources has been done on the basis of data and of formulation and valuation procedures which are still imperfect, and indeed defective. The procedure used for construction was iterative and automatic computation methods were used only for aggregate variables in the 'model'. Notwithstanding all this, a first sketch of the 'Quadro' has been drawn. The first stage ('Progetto Quadro Uno': P.Q.I) is now complete and is described in a series of 39 reports. (For complete list, see Appendix 2.) The sketch will be improved upon in the successive stages of Progetto Quadro.

APPENDIX 1

What stands out as one major result of the first phase of 'Progetto Quadro' is the need to modify the 'Program Structure' (the levels of the category and sub-category of the program) as first constructed.

The modifications refer mainly to the following two types of criteria:

- (a) to give a more balanced picture of the relative importance of the various categories and sub-categories with respect to the amount of resources used;
- (b) to give a more concise meaning and better definition to the aim, need, and frames of reference of the project so that may be also used for a classification of statistical and accounting items.

Of course, this second draft is also provisional. Nevertheless, it will be to this that the first evaluation of the program-timed allocations in the various sectors will refer.

APPENDIX 2

Reports on 'Progetto Quadro I'

Part I: General

1. Construction of general accounting framework for national planning: methodology, research procedure, iteration process and preliminary results, by F. Archibugi.
2. 'Program structure', as a systematic operational basis for planning, by F. Archibugi.
3. Evaluations on a preliminary program-oriented 'general accounting framework' in the decade 1971-1980, by M. Di Palma.

Part II: Goals, standards and planning—indicators

4. The definition of planning objectives: general considerations and adopted criteria, by F. Archibugi.
5. Social indicators for planning operation in justice, by G. Marbach, with Appendix: planning and justice: preliminary considerations on the need for reform of social defense, by G. Di Gennaro.
6. Indicators for planning operations in the health sector, by P. G. Paleani-Vettori.
7. Costs and benefits of a reduction in industrial time-work in Italy, by N. Cacace.
8. Objectives and indicators for a program of professional training, by IREF.
9. Planning oriented estimation of costs and needs of economic service in the field of social security, by R. Mura.
10. Social indicators in the education sector, by F. Karrer.
11. Social indicators in the cultural activities sector, by B. Amoroso.

* This is done with the aid of appropriate 'transition' matrices between final demand for goods and services and the sectors in which these goods and services originate. Traditional production input-output matrices are also exploited.

Project 'Quadro'
aim category

Definition of the levels of the program structure

Assurance of a higher level and constant improvement of:

Program category	1. Personal security	Program sub-category	With program elements
Activity directed to properly fulfill the need for: 1.1. Safeguards for the citizen and crime protection 1.2. Civil aid 1.3. Military defense	1. Personal security Through an efficient system of: 1.1.1. Civil and penal legal activities 1.1.2. Public security 1.1.3. Special social work 1.2.1. Disaster aid 1.2.2. Social emergency aid		To be accomplished through:
Activity directed to properly fulfill the need for: 2.1. Satisfactory life conditions 2.2. Health care provision	2. Physical and mental well-being Through an efficient system of: 2.1.1. Food 2.1.2. Other primary consumption 2.2.1. Overall health care 2.2.2. Special health care 2.2.3. In-patient hospital assistance 2.2.4. Out-patient hospital assistance 2.2.5. Drug and therapy prescription		To be accomplished through:
Activity directed to properly fulfill the need for: 3.1. Employment 3.2. Satisfactory work conditions 3.3. Employment income	3. Work satisfaction Through an efficient system of: 3.1.1. Employment planning 3.1.2. Employment promotion 3.1.3. Employment security 3.2.1. Trade-union associations 3.2.2. Worker conditions protection 3.2.3. Professional advancement 3.2.4. Protection against job accidents and on-the-job illness 3.3.1. Income distribution 3.3.2. Protection against income reduction 3.3.3. Retirement		To be accomplished through:

<p>Activity directed to properly fulfill the need for:</p> <p>4.1. Education</p>	<p>4. Education and culture</p> <p>Through an efficient system of:</p> <p>4.1.1. Elementary education</p> <p>4.1.2. Secondary education</p> <p>4.1.3. Advanced education</p> <p>4.1.4. Permanent education</p> <p>4.2.1. Cultural promotion</p> <p>4.2.2. Enhancement of the cultural patrimony</p> <p>4.2.3. Diffusion of culture and information</p> <p>4.2.4. Cultural operations</p> <p>4.2.5. Religious activities</p>	<p>To be accomplished through:</p>
<p>4.2. Culture and information</p>		
<p>Activity directed to properly fulfill the need for:</p> <p>5.1. Research</p>	<p>5. Research and innovation</p> <p>Through an efficient system of:</p> <p>5.1.1. Basic research</p> <p>5.1.2. Socially oriented research</p> <p>5.2.1. Technological innovation</p> <p>5.2.2. Innovation in productive structures</p>	<p>To be accomplished through:</p>
<p>5.2. Innovation</p>		
<p>Activity directed to properly fulfill the need for:</p> <p>6.1. Sports activities</p>	<p>6. Leisure time and recreation</p> <p>Through an efficient system of:</p> <p>6.1.1. Individual and mass sports</p> <p>6.1.2. Outdoor recreational activity</p> <p>6.2.1. Tourist facilities</p> <p>6.2.2. Organization of tourism</p> <p>6.3.1. Production of films, drama, etc. and intellectual recreation</p> <p>6.3.2. Games</p>	<p>To be accomplished through:</p>
<p>6.2. Touristic activities</p>		
<p>6.3. Other recreational activities</p>		
<p>Activity directed to properly fulfill the need for:</p> <p>7.1. Enhancement of the natural environment</p>	<p>7. Natural environment</p> <p>Through an efficient system of:</p> <p>7.1.1. Parks and natural reserves</p> <p>7.1.2. Defense of the land and the prevention of natural catastrophes</p> <p>7.1.3. Control of pollution and environmental problems</p> <p>7.2.1. Water production</p> <p>7.2.2. Water distribution</p>	<p>To be accomplished through:</p>
<p>7.2. Water production and use</p>		

Assurance of a higher level and constant improvement of:

Program category	1. Personal security	Program sub-category	With program elements
Activity directed to properly fulfill the need for:	8. Housing and urban environment	Through an efficient system of:	To be accomplished through:
8.1. Satisfactory housing conditions	8.1.1. Construction of new residential units 8.1.2. Re-adaptation, rehabilitation, and reorganization of the housing stock 8.1.3. Enhancement of historical centers		
8.2. Access to housing	8.1.4. Acquisition of areas for urbanization 8.2.1. Rent policies 8.2.2. Favorable conditions for financing and credit 8.2.3. Public housing		
Activity directed to properly fulfill the need for:	9. Transportation and communication	Through an efficient system of:	To be accomplished through:
9.1. Urban transportation	9.1.1. Metropolitan railroad communications 9.1.2. Metropolitan street communications 9.2.1. National railroad communications 9.2.2. National highway communications 9.2.3. Maritime communications 9.2.4. Airway communications		
9.2. National and international transportation	9.3.1. Merchandise centers		
9.3. Special infrastructures for transportation of commercial goods	9.3.2. Energy pipelines		
9.4. Telecommunications	9.4.1. Postal and telegraphic service 9.4.2. Telephone, telex, and tele-information services 9.4.3. Radio-television		
Activity directed to properly fulfill the need for:	10. Political participation	Through an efficient system of:	To be accomplished through:
10.1.	10.1.1. Political organization 10.1.2. Constitutional structure 10.1.3. Governmental organization 10.1.4. National and territorial economic and social planning 10.1.5. Regional government administration 10.1.6. Local government administration		
10.2. Participation, integration and international solidarity	10.2.1. Participation in international organizations and communities 10.2.2. Bilateral international relations		

12. Preliminary evaluation of research needs and the determining criteria, by F. De Rosi.

13. Indicators for a program of equipment allocation in the area of recreation and entertainment, by M. Guidi and G. Prasca.

14. Guidelines for a general program of resource allocation for soil conservation, air and water pollution control and hydro-production, by B. Grassetti.

15. Estimation of planning oriented costs and needs in the sector of parks and natural reserves, by V. Cagianca and C. Santuccio.

16. Indicators and preliminary estimation of requirements for social resources in housing and urban services sectors, by P. Crosta.

17. Indicators for levels of 'metropolitanization', by G. Sacco.

18. Objectives and criteria for an evaluation of a general program of allocation for infrastructural development in the transportation sector, by R. Casseti and C. Morelli.

19. Evaluation of allocation requirements in the area of international relations, by M. Bucci.

Part III: Basic research on the population and the labor force

20. Forecasts for the natural growth of the Italian population from 1970 to 1985, by A. Golini.

21. Preliminary program-oriented evaluation of participation rates, by F. Pilloton.

22. Migration goals conforming to the national land-use objective of 'project "80"', by R. Casseti.

Part IV: Prospective for the allocation of resources

23. Preliminary estimation of needs and social allocation projects in the decade 1971-1980 (METROSOC), by F. Archibugi and A. Lacava.

24. Preliminary program-oriented estimation of private consumption during the decade 1971-1980, by R. Filippini.

25. Nutritional orientation for a food consumption policy, by F. Mancini and M. Cresta.

26. The Italian clothing sector: evaluation of needs as opposed to excess consumption, by A. Castellani.

27. The Italian home furnishing sector: estimating needs, by L. Pieraccioni.

28. Public and private means of satisfying individual and collective needs: preliminary elements for planned procedure (CEUCORS), by V. Cao-Pinna.

29. Preliminary estimation of total income uses during the decade 1971-1980, by B. Ferrara.

Part V: Needs and objectives of production

30. The matrices of transition and the input-output model of the 'centro piani': preliminary results, by M. Di Palma and B. Ferrara.

31. Technical coefficients of production, by E. Curcio and C. Ciocca.

32. Objectives and policies of agricultural production (PROEAGR), by N. Pavan, R. Ponsard and N. Tomassini.

33. Program-oriented prospectives for national and regional industrial development (PROEIND), by L. Cassi *et al.*

34. Technical requirements and locational factors in industrial development, by ISRIL.

35. Preliminary evaluation of economic space for new industrial initiative, by L. Bruni, G. Cosentino and G. Puzzo.

36. Objectives and policies of tertiary production: commerce and service (PRORETERZ), by A. Tangucci.

Part VI: Financial and institutional mechanism of the framework

37. Historical distribution of public expenditures according to the program-structure, by G. Marbach.

38. Regional distribution of public expenditures, by B. Ferrara.

39. Financial circuits of the economic system: preliminary investigations and program-oriented evaluation, by C. Fiaccavento *et al.*